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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Govert Nieuwland

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

SANEI, HANA ASMAT

ART UNIT

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2889

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,884	Applicant(s) NIEUWLAND ET AL.	
	Examiner HANA A. SANEI	Art Unit 2889	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4, 6-7 is/are rejected.
- 7) ☒ Claim(s) 3 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/20/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: -- Electric discharge lamp with halide resistant conductor --.

Claim Objections

Claim 3 is objected to because of the following informalities: Since the upper and lower boundaries of molybdenum, to Claim 2, are from Mo₄ to Mo₅, and the upper and lower boundaries of molybdenum, to Claim 3, are from Mo₆ to Mo_{9.6}, Claim 3 cannot be derived nor deduced from the *formulae* drawn to Claim 2, therefore Claim 3 is improperly dependent upon Claim 2. In fact, the resultant compositions to Claim 2 and Claim 3 are separate and distinct from each other. For purposes of examination, Examiner will assume applicant intended make Claim 3 dependent upon Claim 1 and not upon Claim 2.

Appropriate correction is required.

Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to

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identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

1. Claim(s) 1-2, 4, 6-7 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claim(s) 1-2, 4, 6-7 of prior U.S. Patent No. 6992430 to Cillessen et al. This is a double patenting rejection.

Regarding Claim 1, Cillessen teaches an electric discharge lamp comprising: a light-transmissive ceramic discharge vessel; a first and a second current conductor entering the discharge vessel and each supporting an electrode in the discharge vessel; an ionizable filling comprising a rare gas and a metal halide in the discharge vessel; at least the first current conductor within the discharge vessel being halide-resistant, characterized in that the first current conductor at least substantially comprises a material with an at least substantially isotropic coefficient of thermal expansion (as taught in Claim 1 of Cillessen).

Regarding Claim 2, Cillessen teaches the material is chosen from the group of $Y_pSi_3X_q$, wherein Y is chosen from Mo, W, and Ta, and X is B, Al, N, or C with $4 \leq p \leq 5$ and $0 < q \leq 1$ (as taught in Claim 2 of Cillessen).

Regarding Claim 4, Cillessen teaches wherein also the second current conductor at least substantially comprises a material with an at least substantially isotropic coefficient of thermal expansion (as taught in Claim 4 of Cillessen).

Regarding Claim 6, Cillessen teaches wherein said material is co-sintered to the ceramic material of the discharge vessel at a manufacturing temperature of the lamp (as taught in Claim 6 of Cillessen).

Regarding Claim 7, Cillessen teaches that the first and the second current conductor each extend from a sealing compound, which seals the discharge vessel around the current conductors in a gastight manner, to the exterior of the discharge vessel, and wherein the discharge vessel has projecting plugs in each of which a respective current conductor is enclosed and which plugs each have a free end where the discharge vessel is sealed by the sealing compound (as taught in Claim 7 of Cillessen).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim(s) 1, 4, 7 rejected under 35 U.S.C. 102(b) as being anticipated by Van der Voort et al., hereinafter referred to as Voort, (WO 00/34980) as cited by the applicant.

Regarding Claim 1, Voort teaches a light-transmissive ceramic discharge vessel (1, "light-transmissive ceramic lamp vessel," Page 4, lines 26-27, See at least Fig. 1); a first and a second current conductor (2, 3, "current conductors," p. 4, lines 27-28) entering the discharge vessel (1) and each supporting an electrode (4, 5) in the discharge vessel; an ionizable filling comprising a rare gas (Ar gas, p. 4, line 33) and a

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metal halide ("metal halide," p. 4, lines 33-34) in the discharge vessel; at least the first current conductor (2) within the discharge vessel being halide-resistant (21, "first halide resistant part," p. 5, lines 1-2), characterized in that the first current conductor (2) at least substantially comprises a material with an at least substantially isotropic coefficient of thermal expansion (Mo_5Si_3 , "pentamolybdenum trisilicide," p. 5, lines 4-6).

Regarding Claim 4, Voort teaches that the second current conductor (3, Fig. 1) at least substantially comprises a material with an at least substantially isotropic coefficient of thermal expansion (second conductor, 3, comprises Mo_5Si_3 ; p. 5, lines 22-25).

Regarding Claim 7, Voort teaches that the first and the second current conductor (2, 3) each extend from a sealing compound (6, "sealing compound," p. 4, line 30), which seals the discharge vessel (1) around the current conductors (2,3) in a gastight manner, to the exterior of the discharge vessel (exterior of 1), and wherein the discharge vessel has projecting plugs (11,12, "narrow end parts," p. 5, lines 11-12) in each of which a respective current conductor (2,3) is enclosed and which plugs (11,12) each have a free end (111,112) where the discharge vessel is sealed by the sealing compound (6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim(s) 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voort et al. (WO 00/34980) in view of We et al. (Pat. No. 5795837).

Regarding Claim 2, Voort teaches the invention set forth above (see rejection in Claim 1 above). Voort fails to teach the material being formed of $\text{Mo}_5\text{Si}_3\text{C}$.

In the same field of endeavor of **isotropically based coefficient of thermal expansion compositions**, We teaches the material being chosen from the group of $\text{Y}_p\text{Si}_3\text{X}_q$, wherein Y is chosen from Mo, W, and Ta, and X is B, Al, N, or C with $4 \leq p \leq 5$ and $0 < q \leq 1$ ($\text{Mo}_5\text{Si}_3\text{C}$ composite, Col. 4, lines 52-55) in order to provide sufficient mechanical properties such as strength and fracture toughness while maintaining these properties with good stabilities at high temperatures (Col. 1, lines 53-56 & Col. 5, lines 6-11). It should additionally be noted that modifying the composite Mo_5Si_3 , of Voort, with We's $\text{Mo}_5\text{Si}_3\text{C}$ creates a material that is better able to resist heat degradation in the lamp, as the melting point of the material $\text{Mo}_5\text{Si}_3\text{C}$, to We, is significantly greater than the melting point of the material Mo_5Si_3 , to Voort.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify the composition of part of the first conductor, as disclosed by We, in the discharge lamp of Voort in order to provide sufficient mechanical properties such as strength and fracture toughness while maintaining these properties with good stabilities at high temperatures.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Pat. No. 4880707 to Kohno et al.

Bohn et al. teaches in the Journal of Alloys and Compounds 347, pg. 94-100 teaches that Mo_5Si_3 has a relatively "isotropic coefficient of thermal expansion."

Allowable Subject Matter

A. Claim(s) 5 are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

The prior art of record teaches an electric discharge lamp comprising a light-transmissive ceramic discharge vessel; a first and a second current conductor entering the discharge vessel and each supporting an electrode in the discharge vessel; an ionizable filling comprising a rare gas and a metal halide in the discharge vessel; at least the first current conductor within the discharge vessel being halide-resistant, characterized in that the first current conductor at least substantially comprises a material with an at least substantially isotropic coefficient of thermal expansion; wherein also the second current conductor at least substantially comprises a material with an at least substantially isotropic coefficient of thermal expansion.

However, the prior art of record neither shows nor suggests a motivation for the material being of the composition $\text{Mo}_6(\text{Si}_x, \text{Mo}_{1-x})_4(\text{C}_y, \text{Si}_{1-y})_6$ with $0.10 \leq x \leq 0.55$ and $0.15 \leq y \leq 0.40$ as set forth in Claim 5.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hana A. Sanei whose telephone number is (571)-272-8654. The examiner can normally be reached on Monday- Friday, 9 am - 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minh-Toan Ton can be reached on (571) 272-2303. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*/ Hana A. Sanei /
Examiner*

**/TOAN TON/
Supervisory Patent Examiner,
Art Unit 2889**